

Gender Violence and the Price of Virginity

Religion and Human Rights

- Whether social violence rises or falls with religious intensity is a subject of much debate.
- Do certain beliefs cause people to act in ways that violate human rights?
 - conflict between inframarginal and marginal members of religious groups
 - conflict between men and women
- A theory of marriage as an incomplete contract that arises from asymmetric virginity premiums and examines whether this can lead to social inefficiencies.
- Use variation in religious upbringing to help identify the effect of asymmetric virginity premiums on gender violence.
 - The correlation between virginity premiums and female reports of gender violence may be biased downwards if shame is associated with abuse and this shame is greater for women with higher virginity premiums (French 2003).
 - But the correlation for males might not be biased downwards. Asymmetric virginity premiums are positively correlated with men forcing sex on women and paying women for sex.
- Suggests policies regarding the price of virginity may reduce violence if the equilibrium asymmetry converges to these prices.

Asymmetric Virginity Premiums -- Illustration

- Interview (*Chicago Tribune Magazine*)
 - For Carolina, 35, a first-generation Puerto Rican interviewed for this story, coming of sexual age involved **a formal courtship that placed a premium on keeping her and her sisters in check**. In her household, boys would come to the house and "declare" themselves; that is, they would tell the parents that they wanted to date their daughters. Ground rules would be set: Boys were allowed to visit on Tuesdays and Saturdays.
 - **"My sisters never dated,"** says Carolina, the youngest in a family of 12. **"The first guy who declared himself is the guy they married.** The American way, where you date different people and see who you like, wasn't an option."
 - **Carolina and her sisters would meet boys at socially sanctioned and closely monitored places, such as church and family gatherings,** not at high school.
 - **The rules did not apply for the males in the family.** Carolina says her father was something of a womanizer in Puerto Rico, and her brothers, once they moved to the U.S., were allowed to date whomever they wanted, all the while keeping a close eye on their sisters.
 - **One reason for the restrictions is the fear of pregnancy among traditionally devout Catholic Puerto Rican families,** for whom birth control and abortion are not up for discussion.
 - **Even when it came time to go off to college, Carolina's mother was against it.** "She said: **'A girl doesn't study, a girl gets married.** You're going there with all those 'Americanos.' In my mothers book, they were the unknowns," says Carolina. " 'All you want to do is go have sex with boys,' she'd tell me."
 - But the sexual guilt hasn't necessarily gone away. **Since she's not married, it's assumed among certain family members in her community that she still has her virginity. "That's how prized it [is] to this very day,"** she says.
- The phenomena might be attenuated in the US but if we do find an effect here, the asymmetry and its effects could be much worse in developing countries

Asymmetric Virginitv Premiums -- Metaphor

- Inequality between men and women's ex ante and ex post marriage market opportunities
 - Stigma for divorced women
 - # partners
 - Lost labor market time
 - Child burden
 - STD transmission rates
 - Virginitv typically female virtue
- Anecdotal Evidence
 - Virgins expect greater rewards in heaven than married women; puberty and sexual initiation were synonymous for boys (Duby and Perrot, eds)
 - Equating rape and consensual nonmarital sex (Filkins), penalty bride price of virgins (Epstein)
 - Approximately 2 million girls a year encounter female genital mutilation (Nussbaum)
 - Surgery to restore virginitv (Choi); reduced 80% of murders committed when a bride was found not to be a virgin (Kandela)
 - Do-it-yourself hymen repair kits (Pan); virginitv soap (Oriang)
 - Abstinence sex education that differentially faults women (Connolly)

Gender Violence

- Human rights issue, public health problem (IPPF)
 - 40% of Chinese women experience unwanted sex or sex acts (Kew)
 - 25% of South African women's first sexual experience was forced (Epstein)
 - AMA estimates cost of domestic violence \$5-10 billion per year in health care, absences, lost wages, litigation, and incarceration (Rhode)
- Is there a connection between asymmetric virginity premiums and gender violence?
 - In a sample of a faith-based community (Drumm, et.al), 14% believe if women submit to their husbands as God desires there would be less spouse abuse
 - 9% believe if a woman submits to her husband as God desires, God will give her the strength to endure the abuse
 - 10% believe as a Christian, they should be willing to accept a marriage in which some violence is present, rather than separate or divorce

Theory -- Marriage as an Incomplete Contract

- A1: Men and women differ in ex ante and ex post marriage market opportunities
 - The difference-in-differences is termed, *the asymmetric virginity premium*
- P1: Wives or their families should be compensated ex ante for loss of virginity
 - Courtship rituals
 - Lower dowries
 - Higher bride prices
- P2: As long as marriage has a positive surplus, men have the incentive to lower women's ex ante market wages to encourage entry into joint production
- P3: Marriages revealing negative surpluses after marriage would separate under complete contracts but do not under asymmetry
- P4: Equalizing virginity premiums reduce non-domestic and domestic violence

Data: *Chinese Health and Family Life Survey* (N = 3,821) and *National Health and Social Life Survey* (N = 3,432)

China: Interviewers were same gender as respondent, away from home, computerized to maximize privacy

- “Nowadays in our society, some couples have sex when they are dating, and they eventually get married. Is this a moral issue?” Definitely not (1)/mostly not/perhaps yes/definitely yes (4)
- “Some say that a wife should be responsible for the family and domestic tasks while a husband should focus on career and matters outside the household. Do you agree?” 1-4

US: Portions submitted in privacy envelope away from interviewer

- “There’s been a lot of discussion about the way morals and attitudes about sex are changing in this country. If a man and a woman have sex relations before marriage, do you think it is always wrong (4), almost always wrong, wrong only sometimes, or not wrong at all (1)?”
- “What if they are in their teens, say 14-16 years old? In that case, do you think sex relations before marriage are always wrong (4), almost always wrong, wrong only sometimes, or not wrong at all (1)?”

Gender Violence

- “This section relates to what you have done sexually with a man since you reached puberty. Have you ever been forced by a man to do something that you did not want to do?” 1/0
- “Have you ever forced a woman to do something sexual that she did not want to do?”

Asymmetric Virginity Premiums in China

$$P_{ij} = \beta * F_{ij} + \alpha * X_{ij} + \gamma_i + \varepsilon_{ij}$$

	Virginity Premium		No Premarital		Traditional	
Female	0.255*** (0.032)	0.251*** (0.033)	0.134*** (0.013)	0.127*** (0.014)	0.037 (0.033)	-0.008 (0.033)
Age		0.010*** (0.002)		0.008*** (0.001)		0.010*** (0.002)
Education		-0.016 (0.017)		0.007 (0.007)		-0.208*** (0.018)
Urban		-0.154*** (0.040)		-0.057*** (0.017)		-0.048 (0.041)
Working		-0.017 (0.036)		0.011 (0.015)		0.034 (0.036)
Income		-0.003* (0.002)		-0.004*** (0.001)		0.002 (0.002)
Living at Home		-0.158** (0.067)		0.044 (0.028)		0.114* (0.068)
Household Size		0.021 (0.016)		-0.012* (0.007)		-0.031* (0.016)

- Females report higher virginity premiums; less likely to have premarital sex
 - But no more likely to value traditional gender roles
- Assumption: Answer to morality of premarital sex refers more strongly to the behavior of oneself as opposed to others.

Systematic Variation in Asymmetric Virginity Premiums

$$P_{ij} = \beta_0 * F_{ij} + \beta_1 * F_{ij} X_{ij} + \alpha * X_{ij} + \gamma_i + \varepsilon_{ij}$$

	Virginity Premium		No Premarital		Traditional	
Female	0.600*** (0.102)	0.430** (0.186)	0.090** (0.043)	0.179** (0.078)	0.479*** (0.101)	0.081 (0.188)
Female * Education	-0.109*** (0.029)	-0.094*** (0.033)	0.011 (0.012)	0.009 (0.014)	-0.149*** (0.028)	-0.117*** (0.033)
Female * Age		-0.002 (0.003)		-0.004*** (0.001)		0.001 (0.003)
Female * Urban		0.067 (0.070)		0.024 (0.029)		-0.005 (0.070)
Female * Working		-0.127* (0.068)		0.023 (0.028)		0.085 (0.068)
Female * Income		-0.007* (0.004)		-0.001 (0.002)		-0.008** (0.004)
Female * Living at Home		0.318** (0.131)		-0.015 (0.055)		0.359*** (0.132)
Female * Household Size		0.001 (0.031)		0.029** (0.013)		-0.015 (0.032)

- Asymmetric virginity premium disappears with education

Asymmetric Virginity Premiums in the US

$$P_{ij} = \beta * F_{ij} + \alpha * X_{ij} + \gamma_i + \varepsilon_{ij}$$

	Virginity Premium		No Premarital		Teen Moral	
Female	0.272*** (0.040)	0.203*** (0.039)	0.104*** (0.012)	0.095*** (0.012)	0.336*** (0.032)	0.292*** (0.031)
Age		0.021*** (0.002)		0.009*** (0.001)		0.020*** (0.001)
Education		-0.022* (0.012)		0.002 (0.004)		-0.009 (0.010)
Urban		-0.025** (0.012)		-0.007** (0.004)		-0.029*** (0.010)
Income		-0.029*** (0.008)		-0.012*** (0.003)		0.002 (0.007)
White		-0.056 (0.049)		0.095*** (0.015)		0.010 (0.039)
Immigrant		0.062 (0.106)		0.045 (0.032)		-0.081 (0.085)
Household Size		0.115*** (0.013)		0.022*** (0.004)		0.088*** (0.011)
Raised with Religion		0.191** (0.092)		0.040 (0.028)		0.180** (0.074)

- Asymmetric virginity premiums persist in the US
 - Female coefficient again very robust
 - Asymmetry does not disappear with education

Model

- Let W_{fa} : female ex ante wages, W_{ma} : male ex ante wages,
 W_{fp} : female ex post wages, W_{mp} : male ex post wages,
- A1: $W_{fa} - W_{fp} > W_{ma} - W_{mp}$, i.e. female virginity premium $>$ male virginity premium.
- Basic intuition, $W_{fp} = 0$, $W_{ma} = W_{mp} \equiv W_m$.
- Suppose J is the joint production in marriage.
 - Agents receive their outside opportunities plus a share of joint production.
 - Females receive $S/2$ and males receive $S/2 + W_m$, where $S + W_m = J$.
- Females suffer a drop from W_f to $[J - W_m]/2$ but males gain from W_m to $W_m + [J - W_m]/2$.
 - P1: Because of the asymmetry, men have the incentive to compensate women or their families ex ante for virginity.
 - P2: Men also have the incentive to lower women's ex ante market wages until women are indifferent between autarky and joint production.
- Suppose J is uncertain and the surplus can be revealed to be negative after marriage.
 - Under complete contracts, where there are no virginity premiums and everyone has the same ex ante and ex post market wages, if the realized marriage surplus is negative, marriages will efficiently separate.
 - P3: But not under asymmetric virginity premiums.

Model

- More generally, \exists a range of marriage surpluses J such that women lose and men gain from joint production,
- The range, $J_{\max} - J_{\min}$, is twice the differential virginity premium.
 - Females suffer a drop from W_{fa} to $[J - W_{mp} + W_{fp}]/2$
if $J < J_{\max} \equiv 2W_{fa} + W_{mp} - W_{fp}$
 - Males gain from W_{ma} to $[J + W_{mp} - W_{fp}]/2$
if $J > J_{\min} \equiv 2W_{ma} - W_{mp} + W_{fp}$

Model

- More generally, \exists a range of marriage surpluses J such that women lose and men gain from joint production,
- *Proposition 1: Wives or their families should be compensated ex ante for loss of virginity, such as courtship rituals, lower dowries, or higher bride prices.*
 - Males are willing to transfer up to their private gain from joint production.
$$T = W_{fa} - [J - W_{mp} + W_{fp}]/2$$
 - As W_{fa} or $(W_{fa} - W_{fp})$ rises, T tends to rise as well.
 - C1: The greater likelihood of virginity, the greater the bride price or smaller the dowry.*
 - C2: Positive shocks to virginity premiums increase bride prices and decrease dowries.*
 - Time between menarche and age of marriage is positively associated with the dowry paid by the woman's family to the man's family (Field 2004)
 - Bride prices literally translated to “the price of virginity”, paid at the time of a woman's first marriage but not for subsequent ones (Epstein)
 - AIDS Crisis

Model

- \exists a range of surpluses, $J_{\text{mid}} > J > J_{\text{min}}$, where ex ante transfers are not enough to encourage women to enter joint production

Model

- \exists a range of surpluses, $J_{\text{mid}} > J > J_{\text{min}}$, where ex ante transfers are not enough to encourage women to enter joint production
- *Proposition 2: Men have the incentive to lower women's ex ante market wages, W_{fa} , in order to induce entry into joint production.*
 - Males set T and W_{fa} so that women are indifferent between autarky and joint production
$$T + W_{\text{f}}^{\text{indiff}} = W_{\text{fa}}$$
$$W_{\text{f}}^{\text{indiff}} \equiv [J - W_{\text{mp}} + W_{\text{fp}}]/2$$
 - Shotgun marriages (Bernstein)
 - India: men forcing the women they want to marry
 - Equate marginal costs, $C'(T) = C'(W_{\text{fa}})$.
 - Social planner can raise $C'(W_{\text{fa}})$, but
 - C1: Male-centric societies tend to lower the marginal cost of ex ante manipulation.*
 - “blaming the victim” (Rubinger, et.al)

Model

- Ex ante manipulation may entail negative externalities

Model

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- *Proposition 3: Any mechanism which reduces the asymmetric virginity premium (culture, norms, morality, prenuptial agreements, alimony rights) – reduce the incentive to manipulate women's ex ante market wages.*
 - In the case of equal virginity premiums, there is no range of J where asymmetric gains from joint production incentivize ex ante manipulation.
 - *Equalization in either direction*
 - Lowering female virginity premiums (by raising W_{fp})
 - Raising male virginity premiums (lowering W_{mp})
 - raise $W_f^{\text{indiff}} \equiv [J - W_{mp} + W_{fp}]/2$
 - Intuitively, both men and women become specified to marriage.
 - Equalizing virginity premiums completes the incomplete marriage contract.

Model

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 - Abused women tend not to suffer violence until after they marry (Heise).

Model

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- *Proposition 4: \exists a range of marriages with negative surpluses that would have efficiently separated under complete contracts but do not under asymmetric virginity premiums. Asymmetry increases the prevalence of abusive marriages.*
 - Under complete contracts where there are no virginity premiums, if the realized surplus is negative, joint production does not guarantee agents' outside opportunities, marriages efficiently separate.
 - Under asymmetric virginity premiums, women are less inclined to separate.
 - Men are also less inclined to separate. To sufficiently compensate women ex ante for their appropriation, men's ex post market wages may be lowered until their outside opportunities are sufficiently low.
 - Studies of divorced or widowed men suggest partial appropriation to marriage (Waite)

Empirical Questions

- Do asymmetric virginity premiums increase the incentive for men to lower women's ex ante market wages (non-domestic assault)?
- Does asymmetry increase the prevalence of abusive marriages (domestic assault)?

Computing Asymmetric Virginity Premiums -- Example

US West (Pacific)		US South (ESCentral, WSCentral, South Atlantic)	
Female	1.97 (0.08)	Female	2.38 (0.05)
Male	1.79 (0.08)	Male	1.99 (0.06)
Asymmetry (N=377)	0.18	Asymmetry (N=1094)	0.39
US Midwest (Mountain, ENCentral, WNCentral)		US East (New England and Mid-Atlantic)	
Female	2.06 (0.05)	Female	1.86 (0.06)
Male	1.88 (0.05)	Male	1.61 (0.06)
Asymmetry (N=1047)	0.18	Asymmetry (N=678)	0.25

- Female virginity premiums and asymmetries highest in US South
 - Not mechanical – could have had male premiums rise even faster

Computing Asymmetric Virginty Premiums

- Intuitively, like conducting the thought experiment of computing an individual's virginty premium were his or her gender switched.
- Or matching an individual to the closest person of the opposite gender based on observed characteristics and computing the differential premium.

$$P_{ij} = \beta_0 * F_{ij} + \beta_1 * F_{ij} \mathbf{X}_{ij} + \alpha * \mathbf{X}_{ij} + \varepsilon_{ij}$$

$$AVP_{ij} := \underline{\beta}_0 + \underline{\beta}_1 * \mathbf{X}_{ij}$$

Asymmetric and Gender-Specific Virginitly Premiums

$$AVP_{ij} = \psi P_{ij} + \omega_{ij}$$

- Theory suggests asymmetric virginitly premiums, $(W_{fa} - W_{fp}) - (W_{ma} - W_{mp})$, to be positively correlated with female premiums, $(W_{fa} - W_{fp})$, but not male premiums, $(W_{ma} - W_{mp})$.
 - As $(W_{ma} - W_{mp}) \rightarrow 0$, AVP may not be correlated with male premiums at all.

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 - As $(W_{ma} - W_{mp}) \rightarrow 0$, AVP may not be correlated with male premiums at all.

	Female Premium		Male Premium	
	China	US	China	US
Asymmetric Virginitiy Premium	1.105*** (0.141)	0.524*** (0.125)	0.104 (0.104)	-0.410*** (0.141)

- Asymmetric virginitiy premiums and female virginitiy premiums are strongly positively correlated in both China and the US; but not male
- Examining the impact of asymmetric virginitiy premiums may be similar to examining the impact of female virginitiy premiums.

Virginity Premiums And Gender Violence

$$V_{ij} = \beta * P_{ij} + \alpha * X_{ij} + \gamma_i + \varepsilon_{ij}$$

- The OLS between virginity premiums and female reports of gender violence may be biased downwards if shame is associated with abuse and this shame is greater for women with higher virginity premiums (French 2003).
- Instrument: Variation in religious upbringing
 - The more religiously conservative, the higher female virginity premium
 - Two measures:
 - Evangelical: Baptist, Seventh Day Adventists, Pentecostal, Amish, Church of God, Churches of Christ, and other non-mainline Protestant denominations (Lutheran, Methodist, Presbyterian, Episcopalian, Quaker, Disciples of Christ) (Evans 2004)
 - 0-1 index: the fraction of charitable giving contributed to religion, religious intensity as social insurance (Chen 2004). Mormons (0.91), Evangelical Protestant (0.82), Mainline Protestant (0.62), Catholic (0.51), Other (0.50), Jewish (0.40), and None (0.40).
- Control Experiments for traditionalism: parental education and immigrant
 - Are religiously conservative backgrounds correlated with omitted variables such as traditionalism that may be associated with gender violence?

First Stage

$$P_{ij} = \pi_0 * Z_{ij} + \pi_1 * X_{ij} + g_j + \omega_{ij}$$

Religious Conservatism and Virginity Premium (US Female Only)

	Virginity Premium	Teen Moral	No Premarital	Think Sex
Panel A -- Main Experiment				
Evangelical	0.176*** (0.061)	0.009 (0.043)	0.001 (0.020)	0.086 (0.056)
Panel B -- Alternative Measure				
Religious Conservatism	0.984*** (0.208)	0.176 (0.147)	0.198*** (0.069)	0.289 (0.194)
Panel C -- Control Experiment 1				
Parental Education	-0.007 (0.013)	-0.015 (0.009)	-0.007 (0.004)	0.003 (0.012)
Panel D -- Control Experiment 2				
Immigrant	0.202 (0.139)	0.070 (0.098)	0.098** (0.046)	-0.183 (0.129)

- Suggests virginity premium not general moral views towards sex
- Premium, not differences in actual behavior
- Nor are premiums capturing prudishness

Reduced Form

$$V_{ij} = \beta * Z_{ij} + \alpha * X_{ij} + \gamma_j + \varepsilon_{ij}$$

Religious Conservatism and Forced Sex (US Female Only)

	Forced Sex	
Panel A -- Main Experiment		
Evangelical	0.059*** (0.021)	0.061*** (0.022)
Panel B -- Alternative Measure		
Religious Conservatism	0.164** (0.073)	0.168** (0.073)
Panel C -- Control Experiment 1		
Parental Education	0.003 (0.005)	0.003 (0.005)
Panel D -- Control Experiment 2		
Immigrant	-0.064 (0.048)	-0.066 (0.040)

- Do women with higher virginity premiums suffer more gender violence?
- Linear and probit specifications

Virginity Premiums And Gender Violence (2SLS)

$$V_{ij} = \beta * P_{ij} + \alpha * X_{ij} + \gamma_i + \varepsilon_{ij}$$

Impact of Virginity Premiums on Forced Sex (2SLS) (US Female Only)

	Forced Sex		
	OLS	IV	IV
Virginity Premium	0.007 (0.009)	0.344** (0.156)	0.245** (0.105)
	Probit	Probit-IV	Probit-IV
Virginity Premium	0.008 (0.009)	0.345** (0.156)	0.260** (0.107)
IV	-	Evangelical	Conservatism

- Each instrument separately, an overidentification test

Virginity Premiums And Gender Violence

$$V_{ij} = \beta * AVP_{ij} + \varepsilon_{ij}$$

- The OLS between virginity premiums and female reports of gender violence may be biased downwards if shame is associated with abuse and this shame is greater for women with higher virginity premiums (French 2003).
- But the OLS for males might not be biased downwards.

Asymmetric Virginity Premiums and Male Responses (US Males Only)

	Forced Woman	Paid Woman
Asymmetric Virginity Premium	0.041** (0.020)	0.098** (0.047)

- Asymmetric virginity premiums are positively correlated with men forcing sex on women and paying women for sex.

Conclusion

- Asymmetric virginity premiums persist over economic development
 - May be reduced by education but not always
 - Highly correlated with female premiums but not male premiums
- A theory of marriage as an incomplete contract that arises from asymmetric virginity premiums
 - P1: Men may make ex ante transfers
 - P2: Men may seek to lower women's ex ante market wages
 - P3: Inefficient or abusive marriages are less likely to separate
- Women raised in religiously conservative backgrounds have higher virginity premiums and more forced sex
 - But not due to parental education, immigrant traditionalism
- Asymmetric virginity premiums are positively correlated with men forcing sex on women and paying women for sex

Conclusion

- Is the household efficient? (Becker, Chiappori)
 - Growing empirical literature that suggests not (Duflo, Qian)
 - A theory showing why households are not efficient
- Certain beliefs may be a channel through which gender violence arises, indicating that in the mechanism design of optimal beliefs,
 - Policy: Reducing gender differences between ex ante and ex post marriage market opportunities
 - Could prevent a plethora of human rights violations
- What price does society pay for asymmetric virginity premiums?
 - Hermemetrics

Future Research -- Implications of the Theory

- H1: Subsidizing prices that women pay doctors to appear virgin before marriage, or informing women that they are commonly available, would in equilibrium reduce the asymmetric virginity premium, but would it reduce 80% of gender violence (Kandela 1996)?

Future Research -- Implications of the Theory

- H1: Subsidizing prices that women pay doctors to appear virgin before marriage, or informing women that they are commonly available, would in equilibrium reduce the asymmetric virginity premium, but would it reduce 80% of gender violence (Kandela 1996)?
- H2: The US has the highest incidence of rape in the western industrial world, which may be related to it also having the highest virginity premiums: 2.4 million people in the US have signed “virginity pledges” since 1993 (Bearman and Bruckner 2001); are these pledges, and sex-education more generally, alleviating or exacerbating the asymmetry?

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- H3: Social commentators and casual observation suggests inverse premiums exist among some age groups and regions in the Western world today (Denizet-Lewis 2004). The model's predictions would be reversed in this case, ($W_{fp} - W_{fa} > W_{mp} - W_{ma}$, typically, when $W_{fp} > W_{fa}$): women have the incentive to fete and lower men's ex ante market wages and impose shotgun marriages on men.

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- H4: Same-sex marriages can also be examined by this model. To the extent same-sex marriages lack asymmetric virginity premiums, they would be more efficient than mixed-sex marriages. Data is unavailable to examine this hypothesis.

Future Research -- Data

- Data: National Longitudinal Study of Adolescent Health
 - a panel of adolescents into marriage
 - information on virginity pledges and sexual abuse
- Chicago Health and Social Life Survey
 - what is forced sex?
 - targeted sub-samples of african-american, immigrant, and gay communities
- Prices on surgeries from China (71 sites), instrument for AVP
 - $V_{ij} = \beta * Z_{ij} + \alpha * \mathbf{X}_{ij} + \gamma_j + \varepsilon_{ij}$
 - prices of other medical and cosmetic services as control experiments

Future Research -- Experiments

- Assumption: Answer to morality of premarital sex refers more strongly to the behavior of oneself as opposed to others.
- Thought Experiment 1: Gallup Survey, randomization within survey
 - Ask, do or did you prefer yourself/spouse to be virgin at marriage
 - Difference-in-differences = asymmetric virginity premium
 - Randomize gender-specific common knowledge (or the actual announced price):
 - “Nowadays in our society, some women have surgery to appear virgin before marriage”
- Thought Experiment 2: Speed Dating, randomly assign **A**, auction
 - 2nd-price auction where bidders are randomly assigned information on past history orthogonal to omitted variables.
 - Gradient across geographic regions to corroborate AVP methodology
- Thought Experiment 3: \downarrow AVP \Rightarrow \downarrow Violence?
 - Traditional Islam prohibits men from wearing wedding rings but require women to do so
 - Induce separating equilibrium, \downarrow Violence, \downarrow AIDS?